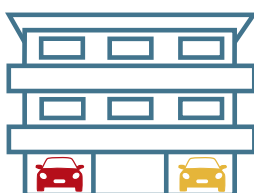


EMR Contractor and Engineer Retrofit Guide

**Minimizing earthquake damage
one building at a time**



**EARTHQUAKE
MULTI-UNIT**
Funds to Strengthen Residential Structures SM

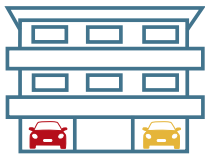
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Established by the California Residential Mitigation Program (CRMP)

CRMP is a joint powers authority created by the California Earthquake Authority and the Governor's Office of Emergency Services. CRMP was established to carry out mitigation programs to assist California homeowners who wish to seismically retrofit their buildings. Our goal is to provide grants and other types of assistance and incentives for these mitigation efforts and EMR is one of these programs.



**EARTHQUAKE
MULTI-UNIT**
Funds to Strengthen Residential Structures™

CRMP.org

Re: Benefits of the EMR Contractor Directory

Dear Contractor,

If you are a contractor listed on the EMR Directory, you are eligible to do EMR seismic retrofit work. EMR provides reimbursement grants to qualifying building owners of up to \$49,600 for code-compliant EMR retrofit work.

- 70% of engineering and permit fees, up to \$7,000, for pre-retrofit engineering consultant fees for the preparation of calculations and construction documents. Only engineering work done following the formal acceptance into the EMR Program qualifies for an incentive payment; and
- 70% of the retrofit cost, up to \$4,260 per unit, for a seismic retrofit done in accordance with the requirements of the EMR Program Rules.



The benefits of a listing on the Contractor Directory include:

- Only contractors listed on the Directory are eligible to complete an EMR retrofit.
- Your listing is searchable by building owners looking for contractors near them.
- Free marketing materials are available to you and can be ordered at EMRTools.org.
- You have access to free program support.
- Your listing on the Directory is free and can include customer testimonials.



To ensure your retrofit work is approved and prompt payment is received, please familiarize yourself with the materials in this packet, which are:

- Program Rules Highlights for EMR (complete Program Rules can be found at www.crmp.org/our-seismic-retrofit-programs/the-retrofits/emr-retrofit);
- Checklist of required photos;
- Construction inspection schedule reporting requirements; and
- Sample Invoice that shows how information must be submitted to receive payment.



Licensed contractors are the backbone of CRMP's success. Together, we've retrofitted more than 40,000 houses and we have plans to provide grants to thousands more property owners. Your work is helping to create more resilient communities, one job and one building at a time.

For more information about the EMR program, visit our website: www.crmp.org/our-seismic-retrofit-programs/the-retrofits/emr-retrofit. If you have any questions, please contact Customer Service at info@crmp.org or at (877) 232-4300.

Thanks for being part of the Earthquake Multi-Unit Retrofit Team!

Sincerely,

California Residential Mitigation Program

Program Rules Highlights for CRMP-funded and FEMA-funded EMR Programs Contractor and Design Professional Version

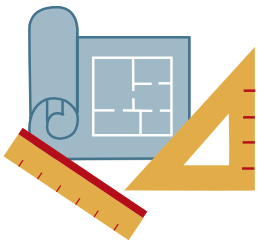
The Earthquake Multi-Unit Retrofit (EMR) Program was developed to help lessen the potential for loss of life, physical injury, and structural damage during an earthquake. Program funding is limited to seismic retrofits of multi-unit residential structures with a minimum of five units and no more than ten units consisting of wood-frame construction and built prior to January 1, 1991.

The EMR Program Rules include, but are not limited to:

- Contractor must be a California Licensed General Building Contractor (License Type A or B) and must be listed on the EMR Contractor Directory.
- The building must be located in a California city with a mandatory, multi-unit residential soft-story retrofit ordinance in place (see EMR-eligible cities at CRMP.org/our-seismic-retrofit-programs/the-retrofits/emr-retrofit)
- The building is multi-story, wood-framed, built before 1991, and has 5-10 residential units.
- The building has a soft, weak, or open front (SWOF) seismic deficiency such as tuck-under parking or open space on the ground floor.
- The building owner has received a notice and order to retrofit from their city.
- The building must not already have an existing, qualifying retrofit in place.

If there is an existing retrofit in place, and the existing retrofit is NOT in accordance with FEMA P-807, IEBC Chapter A4 (latest edition), or ASCE 41 (latest edition) (e.g., a line-only retrofit), then the building may be eligible for this program. An engineer can properly determine the building's retrofit needs.

- Engineering costs incurred prior to acceptance into our program will not be reimbursed.
- Retrofit construction work started before acceptance into the EMR Program renders the application wholly ineligible for reimbursement.
- The building permit must be received and dated after acceptance into EMR in order to be eligible for reimbursement.



-
- The building permit must state the retrofit is in accordance with one of the permitted seismic design criteria documents listed below and in the EMR Program Rules.
 - FEMA P-807,
 - IEBC Chapter A4 (latest edition), or
 - ASCE 41 (latest edition);
 - A full ground story retrofit is required. No line-only retrofits will be accepted.
 - The building owner must meet all program deadlines and submit the required documentation.
 - The building owner must get a minimum of two bids from contractors on the EMR Contractor Directory.
 - When submitting documentation for a FEMA-funded program, the following is required:
 - Plans/Drawings prepared in accordance with one of the required seismic design criteria documents;
 - A minimum of five (5) photos of the exterior of the building must be submitted with a date stamp before the retrofit begins;
 - ☐ an additional five (5) date-stamped photos of the exterior of the building must be taken after the retrofit work is completed;
 - ☐ a minimum of three (3) photos taken of the ground floor area before the retrofit work begins, showing the corners and rear parking wall;
 - ☐ after the retrofit is completed, (3) photos of the ground floor area from the same angle as the before pictures, showing the completed work, must be provided; and
 - ☐ one (1) photo of each new steel moment frame(s) installed at the open garage wall
 - In the FEMA-funded program, pre-retrofit documents and photos will be forwarded to FEMA for review. After receiving approval from FEMA, CRMP will inform the building owner that their retrofit may begin and that they will have 270 days from that day to complete the retrofit. **EMR retrofit construction work must not start before CRMP approves the submitted pre-retrofit documents and photos.** Retrofit construction work started (whether or not completed), before the CRMP approval will make the project ineligible for an EMR incentive payment.
 - The building must successfully pass a final inspection by a local building inspector, confirming the retrofit was done in accordance with the seismic design criteria identified on the building permit.

Required Photos Before and After Retrofit



All exterior building photos must:

- be date stamped
- be digital and clearly show front, back and sides
- show corners connecting side and back or side and front
- show from roof to ground and adjust, if possible, around bushes, trees etc. to show as much of building as possible

BEFORE AND AFTER CHECKLIST

Image	Description	Pre-Retrofit ✓	Post-Retrofit ✓
Building Photos			
Front of building	Front of building	☐	☐
Front of building, left side	Front of building and left side	☐	☐
Back of building, right side	Back of building and right side	☐	☐
Back of building, left side	Back of building and left side	☐	☐
Front of building, right side	Front of building and right side	☐	☐
Garage/Parking Photos			
Parking left side corner	Photo taken of the inside of the parking area, facing the back wall and left corner	☐	☐
Parking right side corner	Photo taken of the inside of the parking area, facing the back wall and right corner	☐	☐
Parking rear wall	Photo taken of the inside of the parking area, facing the back wall	☐	☐
Water Heater/Parking Photos			
Steel Frame	Post-Retrofit photo taken of the steel frame(s), before finishes are applied		☐
Parking interior wall 1	Additional Post-Retrofit photo of interior walls if requested (e.g. if there are multiple interior walls), taken before finishes are applied		☐
Parking interior wall 2	Additional Post-Retrofit photo of interior walls if requested (e.g. if there are multiple interior walls), taken before finishes are applied		☐



Check to make sure you've taken each photo.

APP Resources for Photos*

IPHONE

- PhotoMarks
- DateStamper
- Timestamp Camera

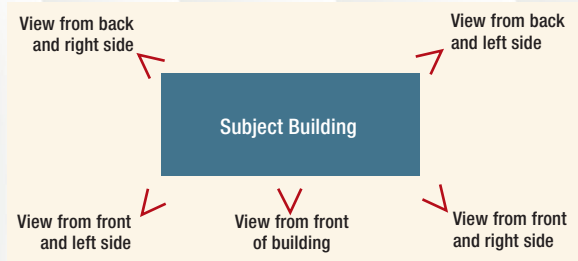
ANDROID

- Vignette—Photo Effects
- Auto Stamper

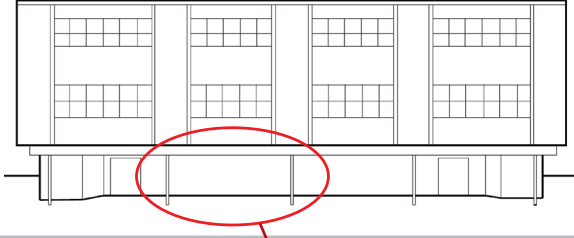
*CRMP does not recommend, endorse or approve of any of these Apps. CRMP provides this list as a convenience only. There are other Apps available.

Examples of Required Photos

Below are sample images. Each soft-story building may have a different parking configuration.



BEFORE

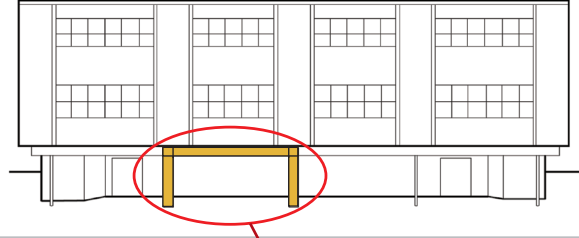


Take photo with no vehicles in the way

Show where the new retrofit will go

FRONT OF BUILDING

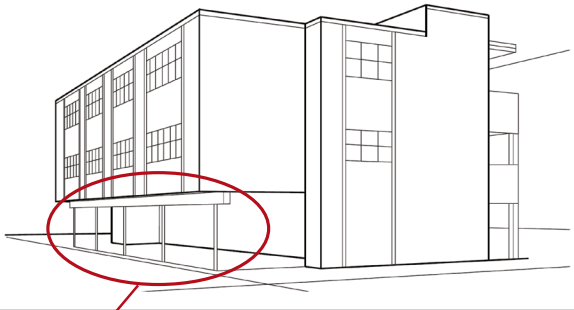
AFTER



Show the new steel frame before finishes are applied

FRONT OF RETROFITTED BUILDING

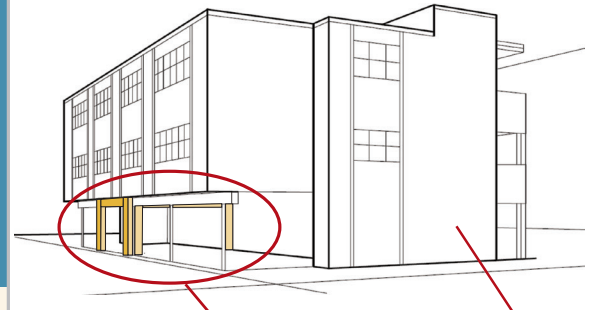
BEFORE



Show where the new retrofit will go

FRONT OF BUILDING AND RIGHT SIDE

AFTER

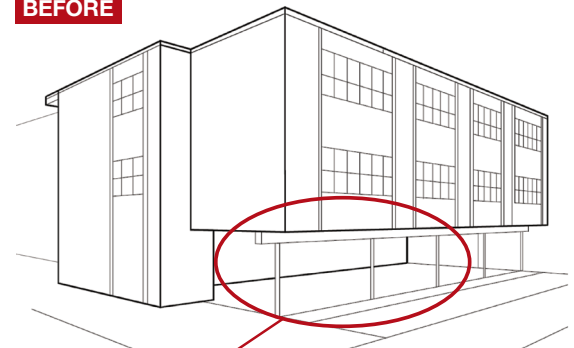


Show the new retrofit before finishes are applied

Show as much of the building as possible

FRONT OF RETROFITTED BUILDING AND RIGHT SIDE

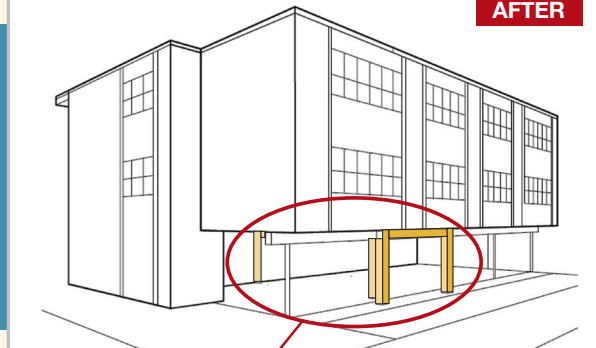
BEFORE



Show where the new retrofit will go

FRONT OF BUILDING AND LEFT SIDE

AFTER

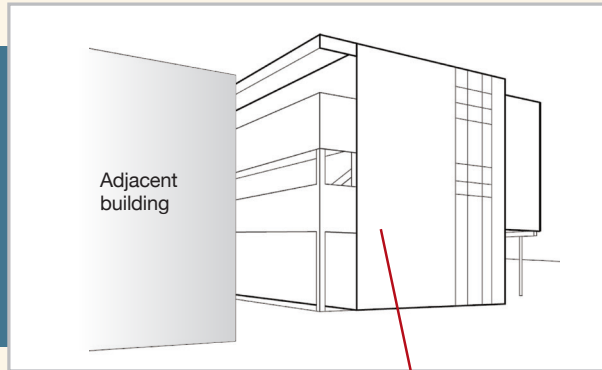
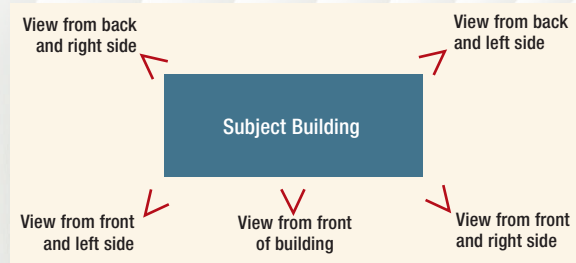


Show the new retrofit before finishes are applied

FRONT OF RETROFITTED BUILDING AND LEFT SIDE

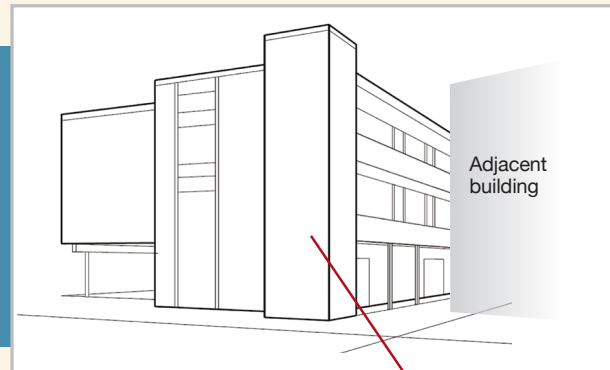
Examples of Required Photos

Below are sample images. Each soft-story building may have a different parking configuration.



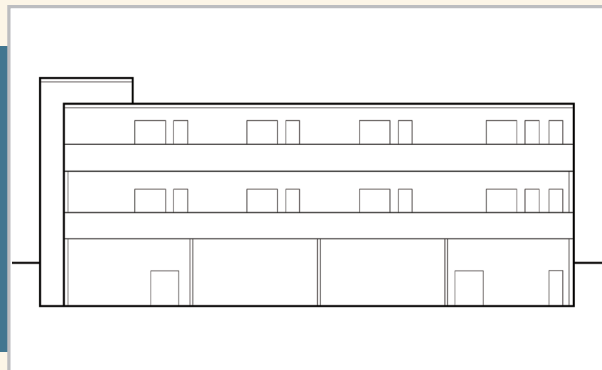
Show as much of the building as possible

BACK OF BUILDING AND RIGHT SIDE



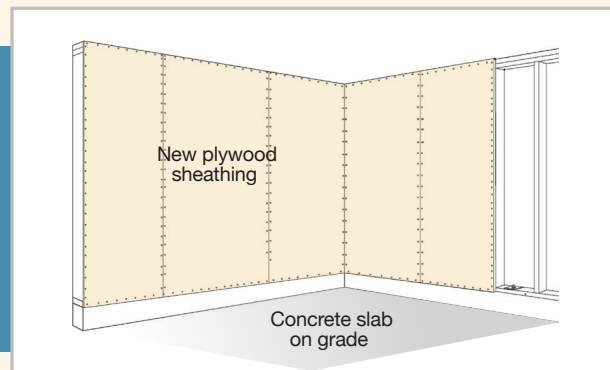
Show as much of the building as possible

BACK OF BUILDING AND LEFT SIDE

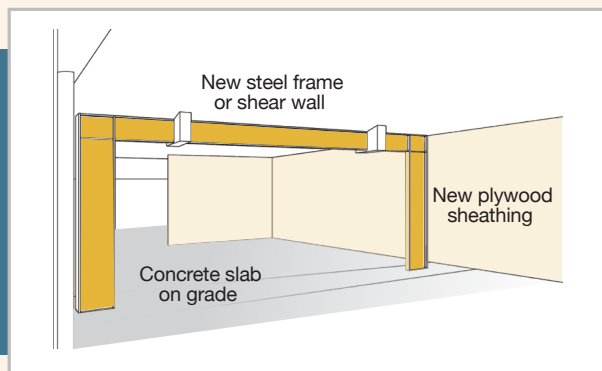


Use camera panorama setting if possible

BACK OF BUILDING



INTERIOR CORNER OF BRACED WALLS



INTERIOR TRANSVERSE BRACING

Free Marketing and Support Materials for Contractors

Introducing Earthquake Multi-Unit Retrofit (EMR) Grant Program!

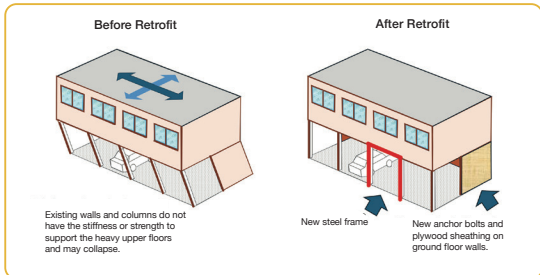
Receive a grant of up to \$49,600 toward a Multi-Unit Soft-Story Earthquake Retrofit

The Earthquake Multi-Unit Retrofit (EMR) program helps property owners of multi-unit residential buildings with 5-10 units lessen the potential for seismic damage during an earthquake.

Buildings that qualify for an EMR grant:

- are located in cities that have a mandatory, multi-unit residential soft-story retrofit ordinance;
- are multi-story, wood-framed, and built before 1991;
- are multi-unit residential buildings with 5-10 units; and
- have tuck-under parking on the ground floor.

Sign-up to receive information about an EMR retrofit here.
CRMP.org/EMR



15,000

Known faults in California

California Geologic Survey

>99%

Chance of 1 or more M6.7 or greater earthquakes striking

UCERF3

\$20B

Total property loss from the 1994 Northridge Earthquake

Seismic Safety Commission



Sample Invoice

Contractor Name
Company Name
CA Contractor License #
Business Address
Ph: (###) ###-####
Fax: (###) ###-####
Email: name@domain.com
Website: www.site.com

DATE: (Enter a date)
INVOICE # (100)

TO:
Building Owner
Mailing Address
Phone Number

FOR:
Seismic Retrofit at
Physical Location
of Building

SALESPERSON	JOB	PAYMENT TERMS	DUE DATE
MATERIALS AND EQUIPMENT			
MATERIALS	Plywood or Oriented Strand Board Sheathing (Number of Sheets and per unit cost)		
	Lumber (2x studs, sills, and blocking)		
	Nails and fasteners		
	Hardware (framing clips and foundation anchors)		
	Anchor bolts (including nuts and washers)		
	Adhesive for Anchor bolts (if required)		
	Proprietary Moment Frame		
	Concrete and reinforcement for foundations		
EQUIPMENT	Rented specifically for the project		
		SUBTOTAL	
		Sales Tax	
		Total Materials and Equipment	
PERMIT AND SERVICE EXPENSES			
Permit Fee			
Labor	Hours, Hourly Rate and Total		
Overhead and Profit			
		Subtotal Permit and Service Expenses	
		Subtotal Materials and Equipment	
		TOTAL	

Thank you for your business!

EMR Program Overview

EMR Sample Estimate/Invoice

Earthquake Multi-Unit Retrofit Program: Rules for Participation

Minimizing earthquake damage to multi-unit residential structures









EMR Rules for Participation

Construction Inspection Schedule Reporting Requirements

In order to receive the incentive payment, the entire retrofit project must be completed (with a signed permit finalizing the construction by the city) before the EMR grant deadline. To ensure that the project is on track to meet the grant deadline, the owner (or the contractor with the owner's permission) must provide periodic status updates to CRMP during construction. The Participating Building Owner must upload, to the Property Owner Dashboard, copies of the project inspection checklist signed off at the following major stages of construction (when applicable):

- a. Foundation;
- b. Steel frame installation;
- c. Plywood sheathing installation and nailing; and
- d. Final inspection

The CRMP review of the submittal does not constitute approval of the work or guarantee that the project is on schedule. It is the building owner's responsibility to inform the contractor of the EMR grant schedule and the EMR Program if there have been any significant construction delays that might affect the construction schedule.

DISCLAIMERS:

- EMR IS FEDERALLY FUNDED AND FEDERAL GRANTS PRESENT RISK OF PROGRAM MODIFICATION AND LOSS OF FUNDING. CRMP IS NOT RESPONSIBLE OR LIABLE FOR CHANGES IN FEMA OR OTHER FEDERAL FUNDING SOURCES OR RULE CHANGES OR TIMING CHANGES THAT MAY REVISE, REDUCE, OR ELIMINATE FEDERAL FUNDING AVAILABLE FOR THIS PROGRAM.
- No guarantee of damage prevention or elimination. An earthquake or natural disaster can occur at any time. The California Residential Mitigation Program (CRMP) and others provide monetary grants to assist qualified building owners in securing structural home improvements in an effort to reduce (but not eliminate) damage or collapse in the event of an earthquake.
- Neither CRMP, CEA, Cal OES or any of its members are liable or in any way responsible for the use of this information, nor do they endorse, warrant, guarantee, attest to or insure, any of the following:
 - a. acts, errors or omissions of property owner, public officials, contractors or design professionals;
 - b. the content of any communications between property owner, public officials, contractors and design professionals;
 - c. the ability or experience of contractors or design professionals to provide services;
 - d. the results of work performed, or not performed, by property owner, public officials, contractors or design professionals;
 - e. that a property owner, public official, contractor or design professional will complete services, conduct any transaction, or perform with any specific standard of care;
 - f. and any public official's involvement approving plans, close out of permits, completing inspections or other actions.

All parties are advised to educate oneself on the background, experience and reputation of contractors or design professionals before starting any project.

We're Here to Answer Any Questions

Homeowner Resources

CRMP.org/contractors-design-professionals

Email

[**info@CRMP.org**](mailto:info@CRMP.org)



Customer Service

(877) 232-4300

Connect with us!



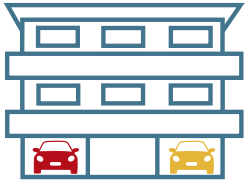
[**www.facebook.com/CaliforniaRMP/**](https://www.facebook.com/CaliforniaRMP/)



[**www.linkedin.com/company/california-residential-mitigation-program/**](https://www.linkedin.com/company/california-residential-mitigation-program/)



[**www.instagram.com/californiarmp/**](https://www.instagram.com/californiarmp/)



**EARTHQUAKE
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400 Capitol Mall, Ste 1200 • Sacramento, CA 95814-4434



**Contractors
needed for
seismic retrofit
work!**